

CLAIMS:

1. An apparatus for decreasing the propagation delay time of an electrical signal transmitted along a conductor in a circuit, the apparatus comprising:

a first conductor having a length extending from a first area of the circuit to a second area of the circuit and for carrying the electrical signal; and

5 a second conductor located proximate the first conductor and extending substantially parallel and along the first conductor, the second conductor electrically coupled to the first conductor.

2. The apparatus in accordance with Claim 1 further comprising a third conductor located proximate the first conductor and extending substantially parallel and along the first conductor, the third conductor electrically coupled to the first conductor.

3. The apparatus in accordance with Claim 2 wherein the first conductor, the second conductor and the third conductor are located substantially in a first plane.

4. The apparatus in accordance with Claim 3 wherein the first conductor and the second conductor and the third conductor each comprise metal.

5. The apparatus in accordance with Claim 3 further comprising a fourth conductor located proximate the first conductor and extending substantially parallel and along the first conductor, the fourth conductor electrically coupled to the first conductor.

6. The apparatus in accordance with Claim 5 wherein the first conductor and the fourth conductor are located substantially in a second plane.

7. The apparatus in accordance with Claim 1 wherein the second conductor reduces the effective capacitance of the first conductor thereby increasing the speed of the electrical signal transmitted on the first conductor.

8. The apparatus in accordance with Claim 7 wherein the first conductor and the second conductor each comprise metal.

9. The apparatus in accordance with Claim 1 wherein the apparatus reduces the propagation delay of a clock signal transmitted on the first conductor.

10. The apparatus in accordance with Claim 1 wherein the length of the first conductor is greater than about 1000 microns.

11. An electrical conductor for increasing the speed of an electrical signal transmitted along the conductor in an integrated, the conductor comprising:

a first conductor having a length extending from a first area of the integrated circuit to a second area of the integrated circuit;

5 a second conductor located proximate the first conductor and extending substantially parallel and along the first conductor; and

means for electrically coupling the first conductor to the second conductor.

12. The electrical conductor in accordance with Claim 11 further comprising:

a third conductor located proximate the first conductor and extending substantially parallel and along the first conductor; and

means for electrically coupling the first conductor to the third conductor.

13. The electrical conductor in accordance with Claim 12 wherein the second conductor and the third conductor are located substantially in a same plane as the first conductor.

14. The electrical conductor in accordance with Claim 12 wherein the coupling of the first conductor to the second conductor and to the third conductor decreases the effective capacitance of the first conductor thus decreasing the propagation delay time of the electrical signal transmitted along the first conductor from the first area to the second

5 area of the integrated circuit.

15. The electrical conductor in accordance with Claim 11 wherein the coupling of the first conductor to the second conductor decreases the effective capacitance of the first conductor thus decreasing the propagation delay time of the electrical signal transmitted along the first conductor from the first area to the second area of the
5 integrated circuit.

16. The electrical conductor in accordance with Claim 15 wherein the length of the first conductor is greater than about 1000 microns.

17. A conductor for transmitting a clocking signal from a first area to a second area of an integrated circuit, the conductor comprising:

a first elongated conductive portion extending from the first area to the second area;

5 a second elongated conductive portion located proximate and space apart from the first conductive portion and extending substantially parallel with the first conductive portion;

10 a third elongated conductive portion located proximate and space apart from the first conductive portion and extending substantially parallel with the first conductive portion;

means for electrically connecting the first conductive portion to the second conductive portion; and

means for electrically connecting the first conductive portion to the third conductive portion.

18. The conductor in accordance with Claim 17 wherein the second conductive portion and the third conductive portion reduce the capacitive effects on the first conductive portion thereby reducing the propagation delay of the clocking signal transmitted from the first area to the second area.

19. The conductor in accordance with Claim 18 wherein the length of each of the first conductive portion, the second conductive portion, and the third conductive portion is greater than about 1000 microns.

20. A method of forming an electrical conductor in a circuit for increasing the speed of an electrical signal transmitted along the conductor, comprising the steps of:

fabricating a first conductor having a length extending from a first area of the circuit to a second area of the circuit; and

5 fabricating a second conductor proximate the first conductor and extending substantially parallel and along the first conductor, such that when the first conductor and the second conductor are electrically coupled together while the electrical signal is transmitted along the first conductor from the first area to the second area, the propagation delay of the electrical signal is decreased.

444647